

Teacher.cs

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace TeacherDataManagementApp
{
    public class Teacher
    {
        public int ID { get; set; }
        public string Name { get; set; }
        public string ClassAndSection { get; set; }

        public Teacher(int id, string name, string classAndSection)
        {
            ID = id;
            Name = name;
            ClassAndSection = classAndSection;
        }

        public override string ToString()
        {
            return $"ID: {ID}, Name: {Name}, Class and Section: {ClassAndSection}";
        }
    }
}
```

Program.cs

```
using System;
using System.Collections.Generic;
using System.IO;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace TeacherDataManagementApp
{
    internal class Program
    {
        private const string FilePath = "teachers.txt";

        static void Main(string[] args)
        {
            List<Teacher> teachers = new List<Teacher>();
            LoadTeachersFromFile(teachers);

            while (true)
            {
                Console.WriteLine("Teacher Data Management");
                Console.WriteLine("1. Add Teacher");
                Console.WriteLine("2. Display All Teachers");
                Console.WriteLine("3. Update Teacher");
            }
        }
    }
}
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        Console.WriteLine("4. Exit");

        Console.Write("Enter your choice (1/2/3/4): ");
        string choice = Console.ReadLine();

        switch (choice)
        {
            case "1":
                AddTeacher(teachers);
                break;
            case "2":
                DisplayAllTeachers(teachers);
                break;
            case "3":
                UpdateTeacher(teachers);
                break;
            case "4":
                SaveTeachersToFile(teachers);
                return;
            default:
                Console.WriteLine("Invalid choice. Please try again.");
                break;
        }

        Console.WriteLine();
    }
}

static void LoadTeachersFromFile(List<Teacher> teachers)
{
    if (File.Exists(filePath))
    {
        string[] lines = File.ReadAllLines(filePath);
        foreach (string line in lines)
        {
            string[] values = line.Split(',');
            if (values.Length == 3 && int.TryParse(values[0], out int id))
            {
                Teacher teacher = new Teacher(id, values[1], values[2]);
                teachers.Add(teacher);
            }
        }
    }
}

static void AddTeacher(List<Teacher> teachers)
{
    Console.Write("Enter Teacher ID: ");
    int id = int.Parse(Console.ReadLine());

    Console.Write("Enter Teacher Name: ");
    string name = Console.ReadLine();

    Console.Write("Enter Class and Section: ");
    string classAndSection = Console.ReadLine();

    Teacher teacher = new Teacher(id, name, classAndSection);
    teachers.Add(teacher);
}

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        Console.WriteLine("Teacher added successfully.");
    }

    static void DisplayAllTeachers(List<Teacher> teachers)
    {
        if (teachers.Count == 0)
        {
            Console.WriteLine("No teachers found.");
            return;
        }

        foreach (var teacher in teachers)
        {
            Console.WriteLine(teacher);
        }
    }

    static void UpdateTeacher(List<Teacher> teachers)
    {
        Console.Write("Enter Teacher ID to update: ");
        int idToUpdate = int.Parse(Console.ReadLine());

        Teacher teacherToUpdate = teachers.Find(t => t.ID == idToUpdate);

        if (teacherToUpdate == null)
        {
            Console.WriteLine("Teacher with the given ID not found.");
            return;
        }

        Console.Write("Enter new Teacher Name: ");
        string newName = Console.ReadLine();

        Console.Write("Enter new Class and Section: ");
        string newClassAndSection = Console.ReadLine();

        teacherToUpdate.Name = newName;
        teacherToUpdate.ClassAndSection = newClassAndSection;

        Console.WriteLine("Teacher updated successfully.");
    }

    static void SaveTeachersToFile(List<Teacher> teachers)
    {
        using (StreamWriter writer = new StreamWriter(FilePath))
        {
            foreach (var teacher in teachers)
            {
                writer.WriteLine($"{teacher.ID},{teacher.Name},{teacher.ClassAndSection}");
            }
        }
    }
}

```
